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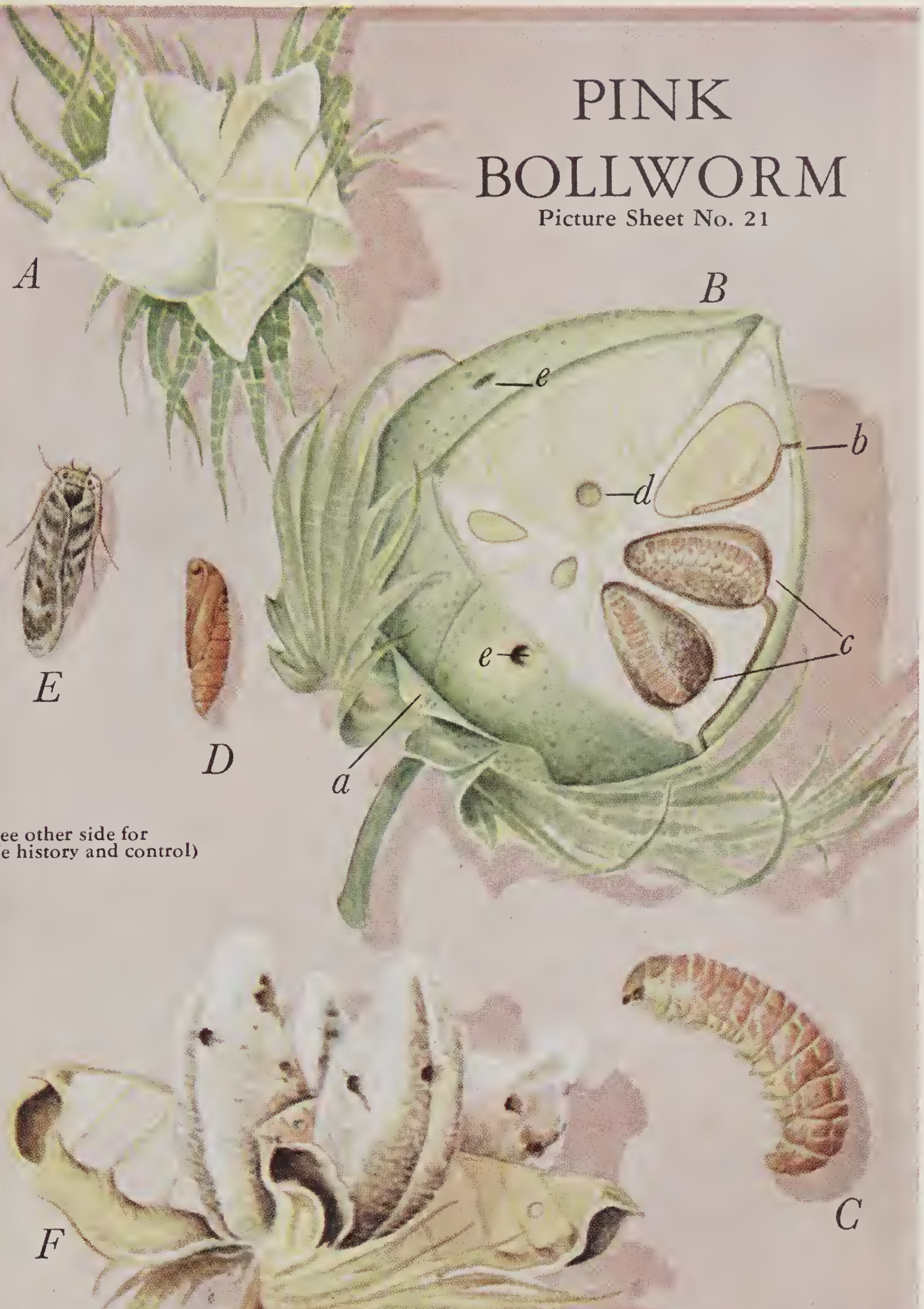
# PINK BOLLWORM

Picture Sheet No. 21




(See other side for life history and control)

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*A*, Cotton bloom rosetted by feeding of the pink bollworm. *B*, Green cotton with the boll sectioned: *a*, Eggs laid inside the calyx of cotton boll; *b*, entrance hole made by newly hatched larva (invisible to naked eye); *c*, larvae in cotton seed; *d*, hole in partition made by a larva traveling from one lock to another; *e*, exit holes of larvae. *C*, Mature larva. *D*, Pupa. *E*, Adult. *F*, Damaged open boll. (*A*, *B*, *F*, twice natural size; *D* and *E*, three and one-half times natural size; *C*, five times natural size.)

Plant Pest Control Division, Agricultural Research Service, U.S. Department of Agriculture

# THE PINK BOLLWORM

*(Pectinophora gossypiella)*

The pink bollworm eats out the seeds of cotton plants. The feeding reduces the yield, weight, viability, and oil content of the seeds. It also reduces the quantity and quality of the lint.

The pink bollworm was found in the United States near Hearne, Tex., in 1917. It now occurs in 7 of the 19 cotton-growing States—Arizona, Arkansas, Florida, Louisiana, New Mexico, Oklahoma, and Texas. Aggressive control measures have prevented serious crop losses in all years, except 1952.

This insect is the most destructive pest of cotton in many parts of the world, particularly in Argentina, Brazil, China, Egypt, and India. In Mexico, significant success in control has been attained in recent years.

## Development

The life cycle of the pink bollworm consists of the egg, larval, pupal, and adult stages. Development from egg to adult requires 25 to 30 days in midsummer. During the growing seasons, the insect may produce 4 to 6 generations.

Early in the growing season, female moths lay their eggs on cotton stems, squares, and terminal buds. Later in the growing season, they lay eggs under the calyx of the bolls. (Each female lays 100 to 200 eggs.) The eggs hatch into larvae in about 5 days.

The young larvae, or pink bollworms, bore into squares or bolls, and feed 10 to 14 days. When full grown, they cut small holes through the bolls and transform into pupae. (Many larvae drop to the ground and pupate in the soil or in surface trash.) The pupae transform into adults in 8 to 10 days.

Late-season larvae pass the winter in cottonseed and waste seed cotton in fields, along roads, and at gins.

## Control

The pink bollworm can be controlled with cultural and other practices that shorten the insect's breeding season and kill overwintering larvae.

These practices will reduce insect breeding: Following the production program recommended for your area by the Extension Service to produce the most profitable crop in the shortest time; avoiding unusually early or late plantings, which extend the breeding period; practicing clean harvest, and taking all cotton to the gins; eliminating regrowth after shredding staples, volunteer cotton, and stub cotton.

To kill overwintering larvae, (1) cut stalks immediately after harvest with a modern stalk shredder and follow up by deep plowing; (2) treat cottonseed with heat sterilization, fumigation, or with another approved method; and (3) treat gin trash by burning or passing it through an approved fan.

Irrigating fields as early as possible in the winter kills many overwintering insects. The use of strippers, and heavy grazing by livestock in fields immediately after harvest, also help in reducing overwintering populations.

DDT can effectively be used to supplement other measures for preventing an insect buildup in the bolls. (See Leaflet 339, The Pink Bollworm: How We Fight It.) *Note:* The application of fungicides to planting seeds protects against such diseases as damping-off.

Strict Federal and State quarantines control the movement of cotton and its products from infested to noninfested cotton-growing areas.

If you find insects that look like pink bollworms, place them in a small bottle of diluted alcohol and send to:

Plant Pest Control Division
Agricultural Research Service
Washington 25, D.C.

When sending specimens, include your name, address, and complete information as to date and place of collection. *Do not send live insects through the mail.*

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